

AMENDMENTS TO THE CLAIMS

1. (Cancelled)

2. (Currently Amended) A method for inhibiting RNase H activity of reverse transcriptase comprising the step of:

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administering neomycin to an ~~targeting~~ RNA-DNA hybrid substrates ~~of the~~ RNase H activity of RT, wherein the neomycin anti-viral agent of claim 1 ~~targets and binds to~~ the RNA-DNA hybrid substrates, thereby preventing reverse transcriptase from cleaving an RNA strand of the RNA-DNA hybrid substrate ~~inhibiting the RNase H activity of reverse transcriptase~~.

3-5. (Cancelled)

6. (Currently Amended) The method of claim 2 [[5]], wherein the neomycin to RNA-DNA hybrid substrate molar ratio is 1:1.

7. (Original) The method of claim 6, wherein the neomycin inhibits reverse transcriptase induced cleavage of the substrate by 80% at the primary site.

8. (Currently Amended) The method of claim 2 [[5]], wherein the neomycin to RNA-DNA hybrid substrate molar ratio is 5:1.

9. (Original) The method of claim 8, wherein the neomycin completely inhibits reverse transcriptase induced cleavage of the substrate at the primary site.

10. ~~(Cancelled)~~

11. (Currently Amended) A method for inhibiting HIV-1 reverse transcriptase comprising the step of:

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administering neomycin to an targeting RNase H RNA-DNA hybrid substrate of RT,
wherein the neomycin anti HIV-1 agent of claim 10 targets and binds to the RNA-DNA
hybrid substrate at the location of RNase H activity, thereby preventing reverse transcriptase
from cleaving an RNA strand of the RNA-DNA hybrid substrate inhibiting viral replication
of HIV-1.

12-17. ~~(Cancelled)~~

18. (New) The method of claim 2, wherein the method treats a virus-related disease.

19. (New) The method of claim 18, wherein the disease is HIV.

20. (New) The method of claim 2, wherein neomycin binds in a double helix groove of the RNA-DNA hybrid substrate.

21. (New) The method of claim 2, wherein RNA-DNA hybrid substrate is in an A-like conformation.

22. (New) The method of claim 11, wherein viral replication of HIV-1 is inhibited.

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contd

23. (New) The method of claim 11, wherein the neomycin binds in a double helix groove of the RNA-DNA hybrid substrate.

24. (New) The method of claim 11, wherein RNA-DNA hybrid substrate is in an A-like conformation.
